

Work Order ID 108780

October-29-13 10:02:12 AM 647.9711

\*108780\*

Page 1

Item ID: 647.9711

B108780

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Upper Body

Start Date: 10/29/13 Start Qty: 100.00

\*100\*

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 100.00

\*100\*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-10-31

Tooling: Date:

Run Start \*NR1\*

QC: Date:

SPC (Y/N): Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

647.9700

A1

100

0.00

\*100\*

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 7.425"

20 0 213-11-10

110

0.00

\*110\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per folio FB183

DWG REV: A

FOLIO REV: AA

2- deburr and break all sharp edges

B.A. 13/11/12  
SL

20 0 DAS 08 9-83

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 108780

\*108780\*

Page 2

October-29-13 10:02:12 AM

Item ID: 647.9711

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Upper Body

Start Date: 10/29/13 Start Qty: 100.00

\*100\*

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 100.00

\*100\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*  
Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo	0.00  0.00		SL B.A	13/11/12	20	0		DAS 08 9-89
130 *130* QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00		OK	13/11/14	20	0		
131 *131* HandFinish Hand Finishing	  Memo Clean & remove all part markings (acid etch only)	0.00  0.00		N/A					OK 13/11/14 20

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave* <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 108780

October-29-13 10:02:12 AM

**\*108780\***

Page 3

Item ID: 647.9711

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Upper Body

Start Date: 10/29/13 Start Qty: 100.00

**\*100\***

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 100.00

**\*100\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

**\*140\***

Outsource4

Memo

0.00

Outsource process - Anodize

Issue P/O to ATG : 22038

1- Black Anodize as per Dwg 647.9700

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Conformity is required

OL 13/11/14 (20)

150

Receive & Inspect for Damage & Mat'l Certs

0.00

**\*150\***

Packaging

Memo

0.00

Packaging

13/12/2 (20)

155

QC5- Inspect part completeness to step on W/O

0.00

**\*155\***

QC

Memo

0.00

Quality Control

DAS  
27  
9-89

13/12/02

20

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other  _____ _____ _____
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Work Order ID 108780

\*108780\*

Page 4

October-29-13 10:02:12 AM

Item ID: 647.9711

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Upper Body

Start Date: 10/29/13 Start Qty: 100.00

\*100\*

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 100.00

\*100\*

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start \*NR1\*

QC: Date: SPC (Y/N): Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

Identify as per dwg & Stock Location: *composites*

0.00

\*180\*

*(finishing)*

Packaging

Memo

0.00

Packaging

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

*20*

*whl 13-12-02*

190

QC21- Final Inspection - Work Order Release

0.00

\*190\*

QC

Memo

0.00

Quality Control

*13/12/03*

*MB-12-2*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
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Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

October-29-13 10:02:12 AM

Page 1

Work Order ID: 108780  
 Parent Item: 647.9711  
 Parent Item Name: Upper Body

Start Date: 10/29/13 Required Date: 10/29/13  
 Start Qty: 100.00 Required Qty: 100.00

Comments: IPP REV:A NEW ISSUE JFS 13/04/10 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000 7075T6 BAR 5.000" X 1.000"		Purchased	No			100	f	95.4878	0.619	66		SL 13-11-10	

## Location

## Loc Qty

## Loc Code

MAT

7.8

125554

7.8

MAT008

87.6878316

M125997

6.0008316

M126615

21.477

M126981

60.21

~~1.89~~ 2.74

\* 8.42

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other  _____ _____ _____
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**APICAL**  
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

03933

SHEET 1 OF 1

DWG NO. 647.9700

REV: A

PREPARED BY B. PETERS

DATE: 06/14/13

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSYS

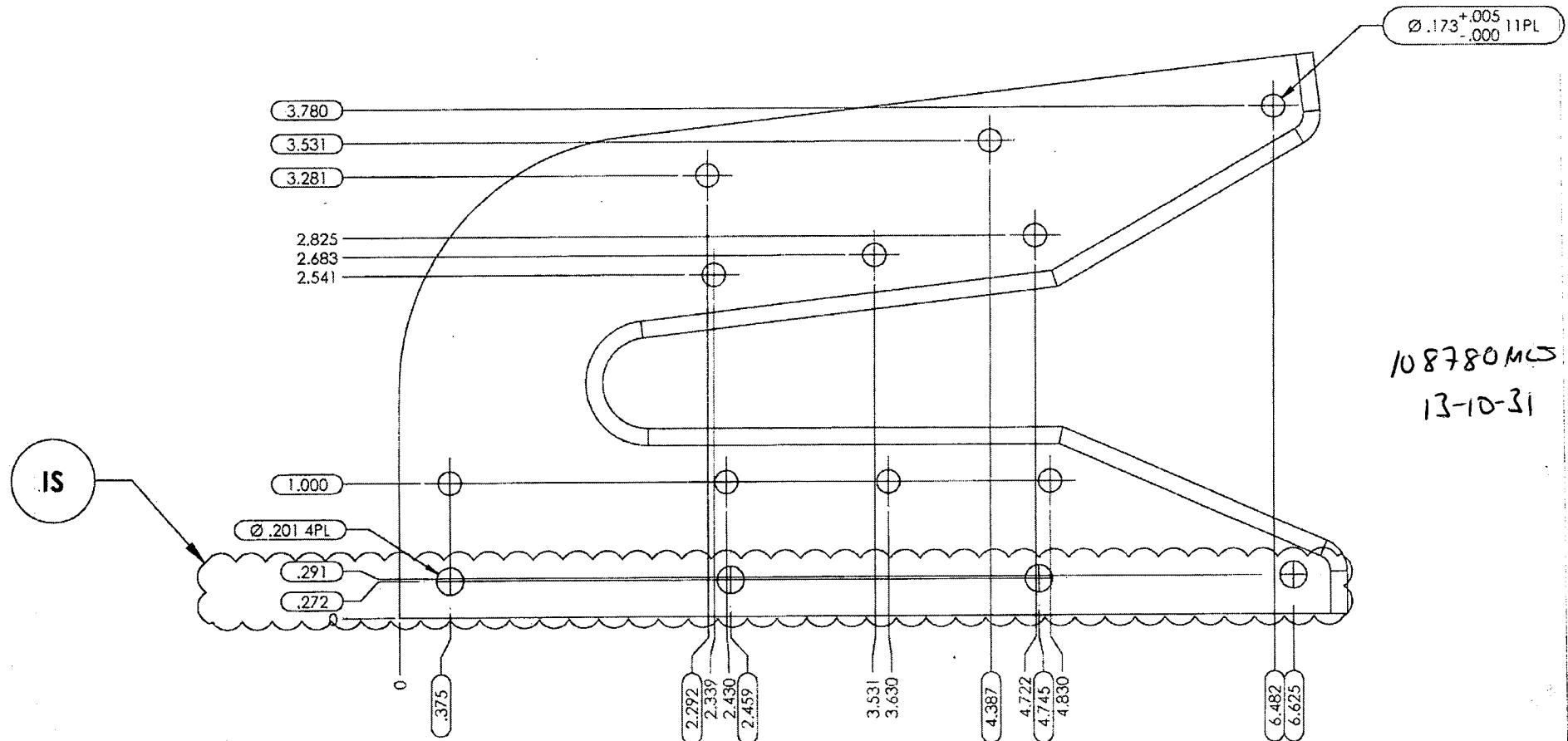
APPROVED BY: ENGR *[Signature]*

MFG *[Signature]* QC *[Signature]*

EFF. CURRENT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: CORRECTED DIMENSIONAL ERROR.



**SHEET 7, ZONE C1 IS:**

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

108780

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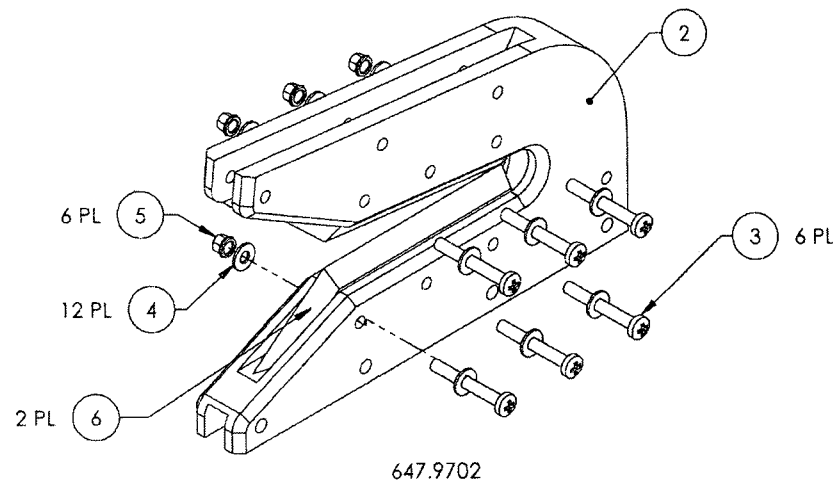
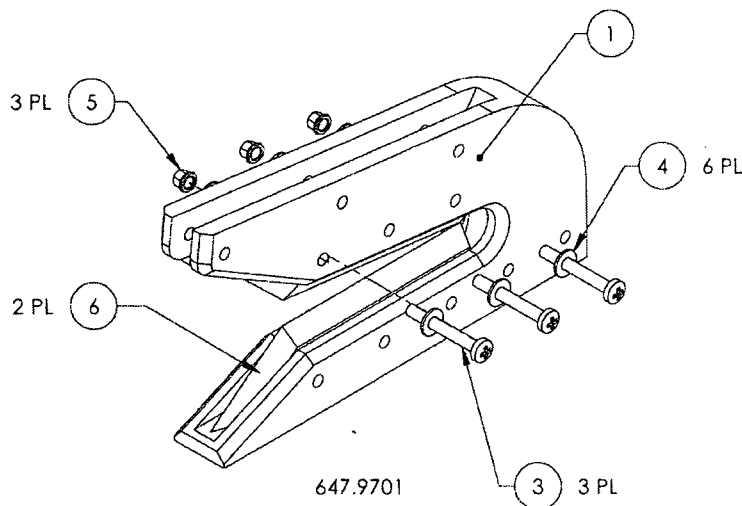
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N: 1-2 MIL MAX.
- 4 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED.
- 5 IDENTIFY IAW MPP-120.
- 6 APPLY F/N 7 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6 UPON ASSEMBLY.
- 7 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE.
- 8 DIMENSION SHOWN IS FOR INSPECTION AFTER FINISH.

UNINCORPORATED ECN(S)

03433

REV	DESCRIPTION	DATE	APPROVED
1	LAST PRELIMINARY RELEASE PER		
2	INITIAL RELEASE	06-28-10	P. BRAVO
3	INCORPORATED ECN(S) 03433	06-17-12	P. BRAVO

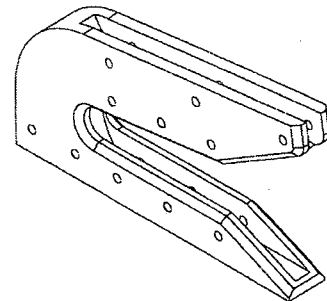
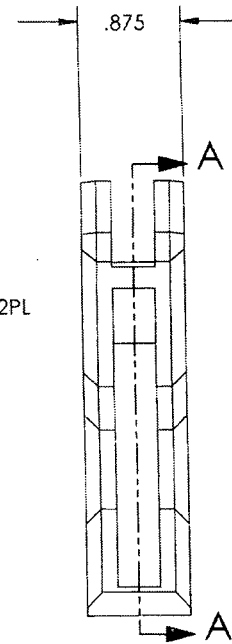
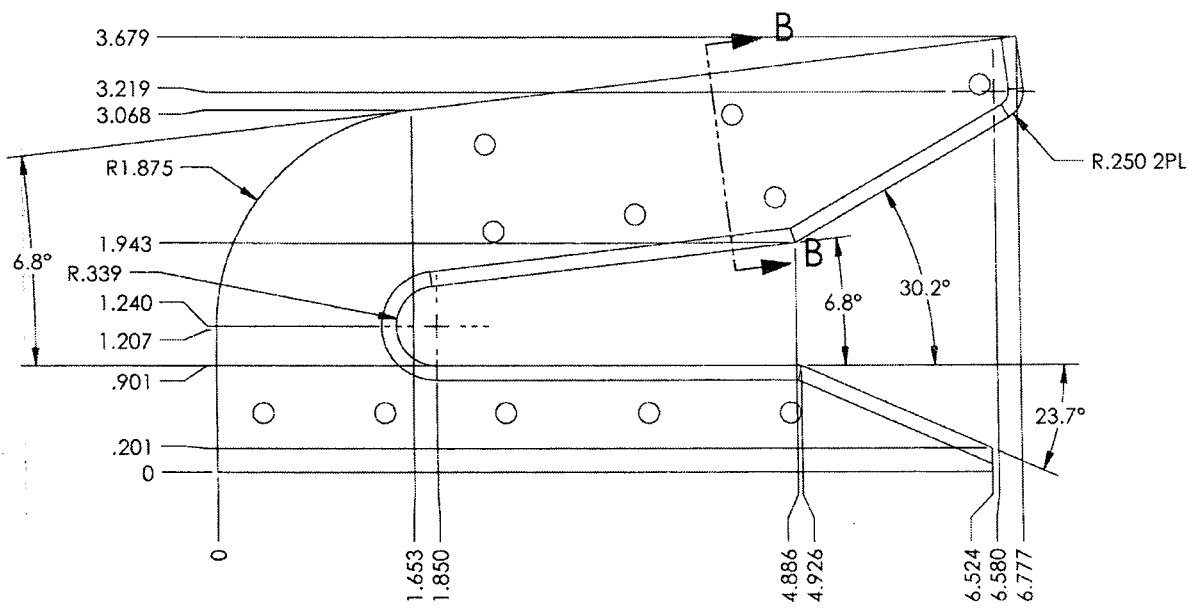


A/R	A/R	7	601.2764	RTV	LOCITE 598	
2	2	6	646.9711	BLADE		
6	3	5	601.1541	LOCKNUT	MS21042L08	
12	6	4	601.2764	WASHER	NAS1149-N832P	
6	3	3	601.2765	SCREW	MS27039-0819	
1		2	647.9711	UPPER BODY		
	1	1	647.9710	LOWER BODY		
			647.9702	UPPER CUTTER ASSY		
			647.9701	LOWER CUTTER ASSY		
QTY	9701	FIND #	PART #	DESCRIPTION	MATL	SPEC.
PARTS LIST						
NEXT ASSY (S)				APICAL INDUSTRIES		
647.9700				2608 TEMPLE HEIGHTS DR.		
				OCEANSIDE, CA, 92056-3512 (760)724-5300		
				CUTTER SUB ASSYS		
				647.9700		
				SCALE NONE		
				1 SHEET 1 OF 7		

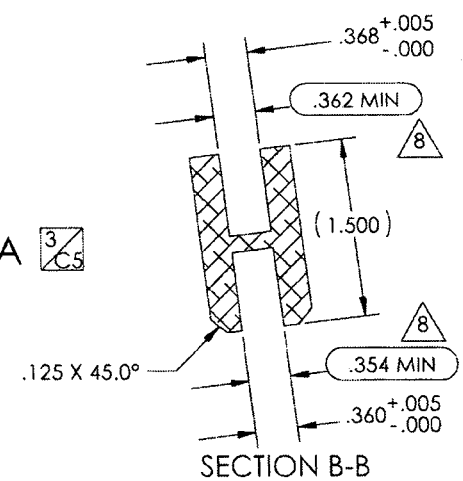


108780

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647.9710



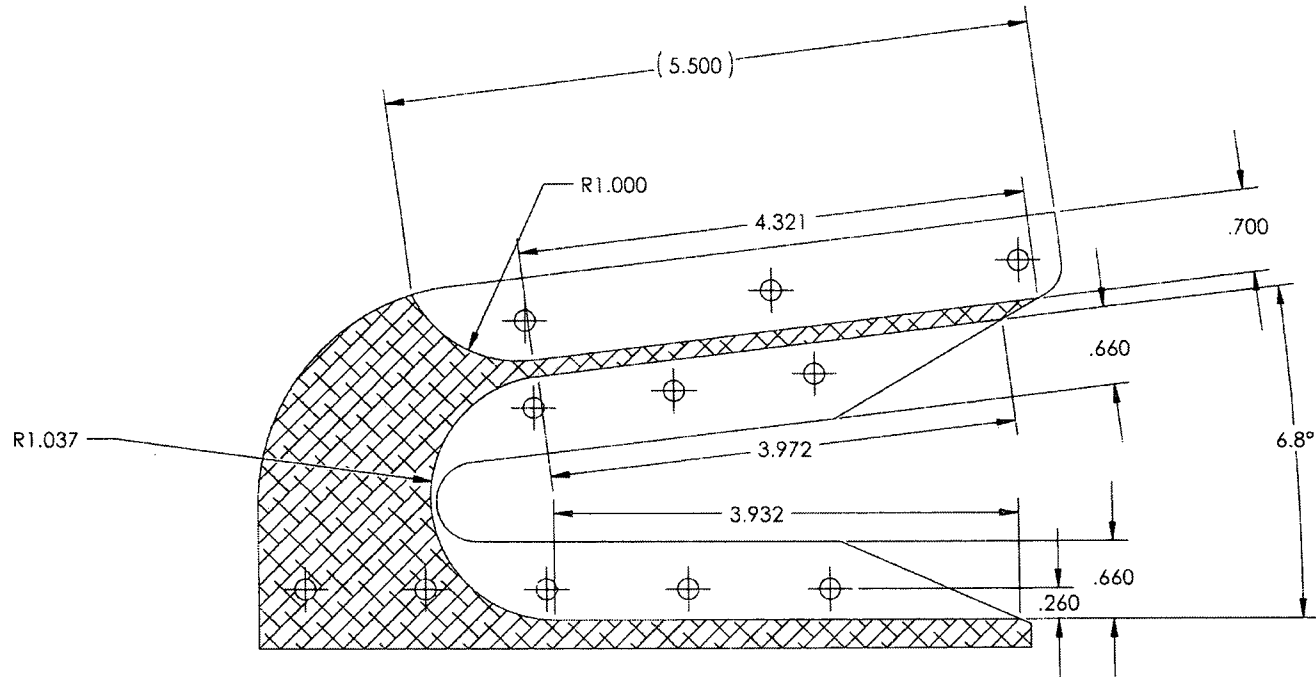
SECTION B-B

ORIGINAL DATE: 02/01/99 08:25:10		APICAL INDUSTRIES	
DRAWN BY: A. GILMAN		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. DRAVO		OCEANSIDE, CA. 92036-3512 (760) 724-5300	
DESIGNED BY: P. DRAVO		CUTTER SUB ASSYS	
APPROVED BY: P. DRAVO		SHEET 2 OF 7	
CONTRACTING: NONE		SCALE: NONE	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: 2 PLACE DECIMALS: .010 3 PLACE DECIMALS: .005 4 PLACE DECIMALS: .001		SHEET 2 OF 7	



108780

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SECTION A-A 2/86

ORIGINAL DATE AND BY: 01/24/86		APICAL INDUSTRIES	
DRAWN BY: A. QUAN	CHECKED BY: P. PRAYD	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL BY: [Signature]		CUTTER SUB ASSYS	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS 3 PLACE DECIMALS FOR ANGLES & 3"		REV. NO. E 07M26	REV. NO. 647.9700
SCALE: NONE		SHEET 3 OF 7	



108780

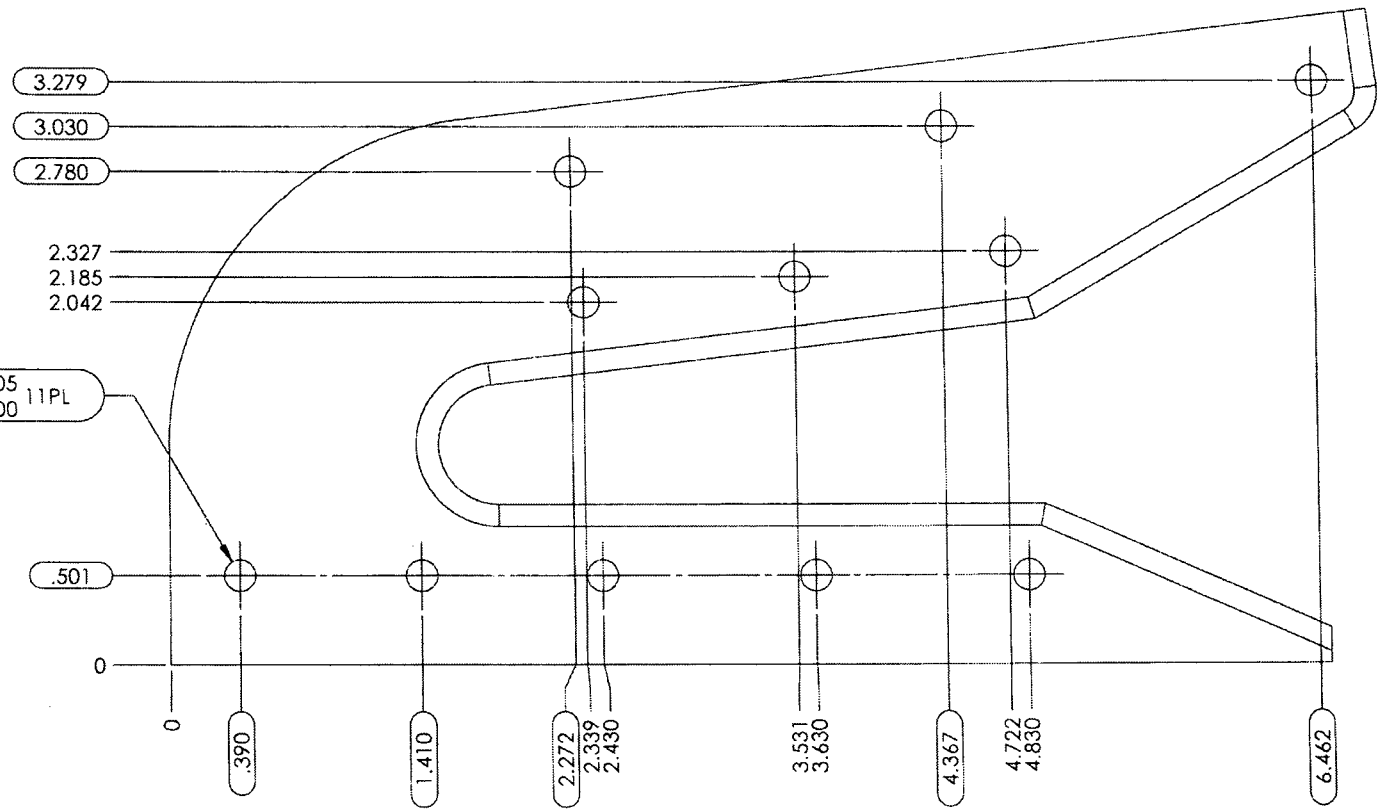
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A

B

C

D



$\phi .177^{+.005}_{-.000}$  11PL

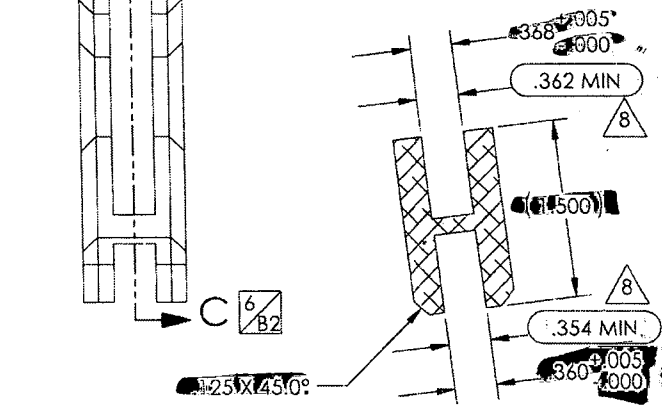
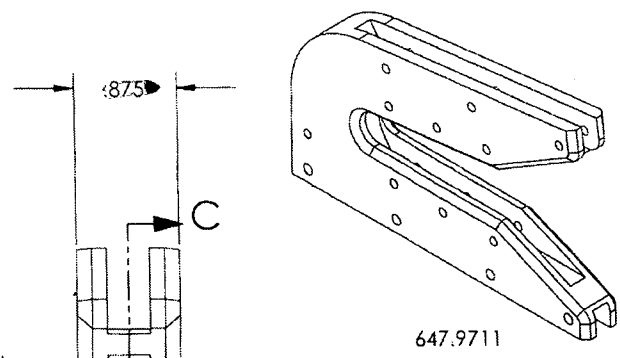
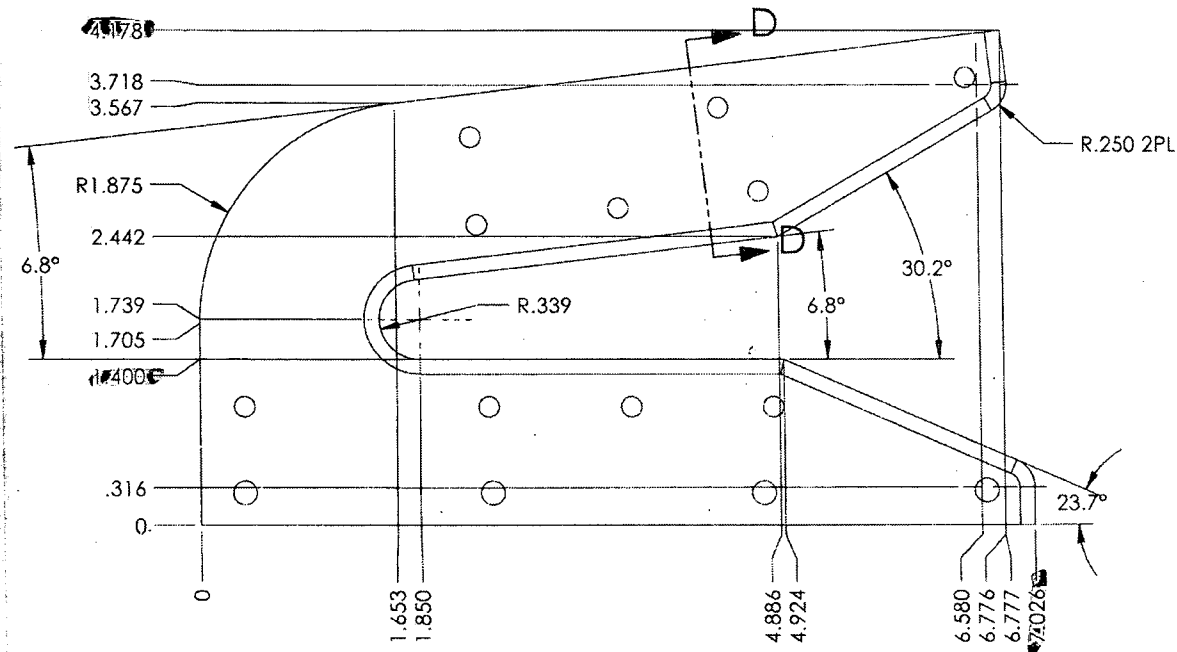
HOLE LOCATIONS +/- .002

ORIGINAL DATE		APICAL INDUSTRIES	
DRAWN BY		2608 TEMPLE HEIGHTS DR.	
CHECKED BY		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL		CUTTER SUB ASSYS	
CONTRACT NO.		647.9700	
SHEET 4 OF 7		SCALE NONE	



108780

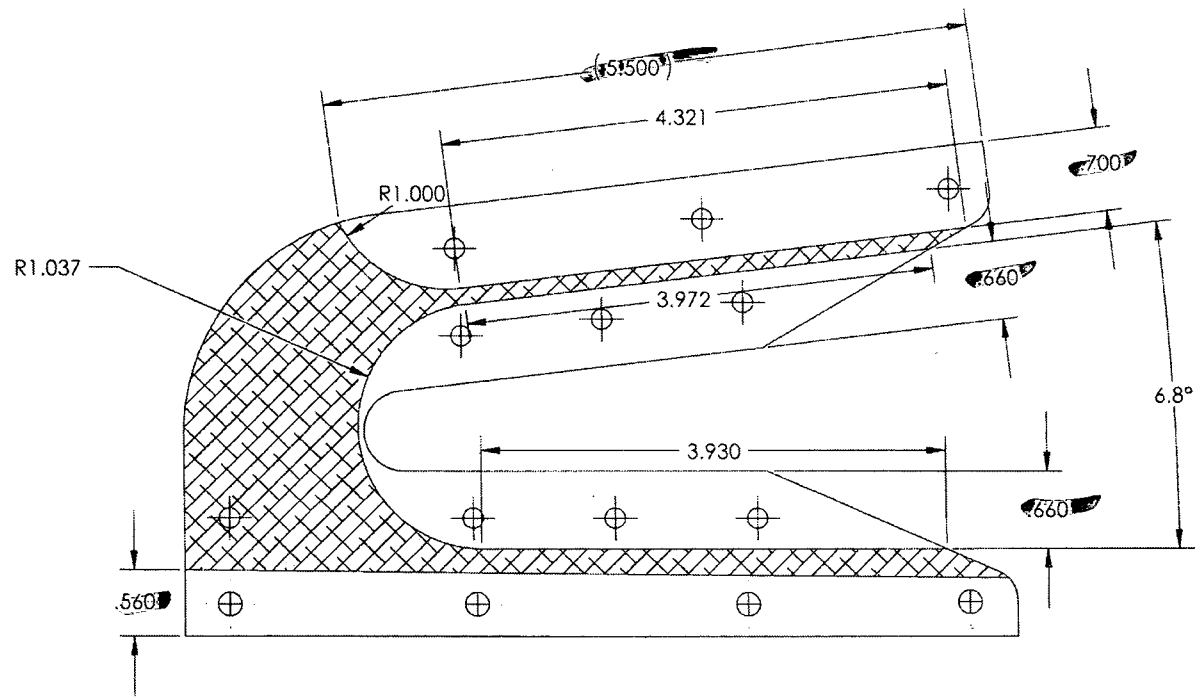
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ORIGINAL DATE NOV 20 1970	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300
DRAWN BY A. QUINN	CHECKED BY P. BRADY
DESIGNED BY J. BRADY	APPROVED BY J. BRADY
DATE NOV 20 1970	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE DECIMALS .001	SCALE: NONE
SHEET 1 OF 2	SHEET 3 OF 7

108780

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SECTION C-C 5  
B6

ORIGINAL DATE 10/25/91 BY: JMD		APICAL INDUSTRIES	
DRAWN BY: JMD		2608 TEMPLE HEIGHTS DR.	
A. GRAHAM		OCEANSIDE, CA. 92056-3512 (760) 774-5300	
CHECKED BY: JMD		CUTTER SUB ASSYS	
DRAWING APPROVAL (Signature)			
EQUIPMENT			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ±.015 ANGLES ±.5°		REV. NO. 647.9700	REV. A
SCALE: NONE		SHEET 6 OF 7	

108780

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Ø 1.73  $\begin{matrix} +.005 \\ -.000 \end{matrix}$  11 PL

Ø 3.780

3.531

Ø 3.281

2.825

2.683

2.541

Ø 1.000

Ø 2.01 4 PL

Ø 2.72

0

Ø 3.75

$\begin{matrix} 2.292 \\ 2.339 \\ 2.430 \end{matrix}$  Ø 2.7459

$\begin{matrix} 3.531 \\ 3.630 \end{matrix}$

4.387

$\begin{matrix} 4.722 \\ 4.745 \end{matrix}$  Ø 4.830

$\begin{matrix} 6.482 \\ 6.625 \end{matrix}$

HOLE LOCATIONS +/- .002

ORIGINAL DATE UNION CITY, CA 30-10		APICAL INDUSTRIES	
DRAWN BY A. GUAN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300	
CHECKED BY P. BIVANO		CUTTER SUB ASSYS	
DESIGNED BY A. GUAN		REV A	
CONTRACT NO.		SCALE NONE SHEET 7 OF 7	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONAL DECIMALS ± .005 3 PLACE DECIMALS ± .010 ANGLES ± .5°		QTY 1 CAGE CODE B D/M/Y 07/16 ENG. NO. 647.9700	



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 108780
<b>Description:</b> UPPER BODY	<b>Part Number:</b> 1647.9711
<b>Inspection Dwg:</b> 6479700 Rev: A	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
875	$\pm 0.10$	878	/		Vern	SL-10
368	$\pm 0.05$ $\pm 0.00$	368	/			
1.500	$\pm 0.10$	1.501	/			
360	$\pm 0.05$ $\pm 0.00$	362	/			
125X45.0	$\pm 0.10$	125X45.0	/			
1.400	$\pm 0.10$	1.401	/			
4.178	$\pm 0.10$	4.178	/			
7.026	$\pm 0.10$	7.026	/			
560	$\pm 0.10$	561	/			
660	$\pm 0.10$	660	/		HG	
660	$\pm 0.10$	660	/			
700	$\pm 0.10$	700	/		Vern	
5.500	$\pm 0.10$	5.497	/			
0.201	$\pm 0.05$ $\pm 0.01$	0.201	/			
0.173	$\pm 0.05$ $\pm 0.00$	0.174	/			
272	$\pm 0.002$	272	/			
1.000	$\pm 0.002$	1.000	/			
3.281	$\pm 0.002$	3.281	/			
3.780	$\pm 0.002$	3.781	/			
375	$\pm 0.002$	375	/			
2.459	$\pm 0.002$	2.459	/			
4.745	$\pm 0.002$	4.745	/			
6.625	$\pm 0.002$	6.625	/			

<b>Measured by:</b> JL/A	<b>Audited by:</b> [Signature]	<b>Preliminary Approval:</b>
<b>Date:</b> 13-11-10	<b>Date:</b> 13/11/14	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 62765

Date: 02-Dec-13

To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ship To


DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 lot	Part: ASST  6 PCS 646.2910 (48.00) ✓ 4 PCS 646.3810 (6.55) ✓ 4 PCS 646.3812 (5.45) ✓ 20 PCS 646.3813 (6.10) ✓ 8 PCS 647.5710 (12.75) ✓ 10 PCS 649.5311 (20.15) ✓ 8 PCS 649.5312 (9.80) ✓ 3 PCS 647.1814 (6.90) ✓ 9 PCS 646.3813 (6.10) ✓ 3 PCS 647.1815 (6.90) ✓ 29 PCS 647.9310 (18.00) ✓ 26 PCS 647.9315 (14.35) ✓ 20 PCS 647.9711 (14.50) ✓  HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2  PRIME MIL-P-23377J TYPE I CLASS N Job: 20130745      PO: 22038      Line:	Rev:	
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE : 2/12/13			
CERTIFIED SIGNATURE : 			
RECEIVER SIGNATURE : _____			

